

Notice of Allowability

Application No.

10/686,505

Examiner

Jason M. Nolan, Ph.D.

Applicant(s)

SUN ET AL.

Art Unit

1626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 5/8/2006.
2. ☒ The allowed claim(s) is/are 1,3-5,8-10,13-26,28-30,34-36 and 38 (now 1-28).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 3/29/06; 2/2/06
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Claims 1, 3-5, 8-10, 13-26, 28-30, 32, 34-36 and 38 are currently pending in the application. **Claims 2, 6, 7, 11, 12, 27, 31, 33 and 37** have been cancelled, **Claims 1, 8, 10, 13, 14, 15, 22, 25, 26, 34, 36, and 38** have been amended, and no new claims have been added.

Information Disclosure Statement

Applicants' information disclosure statements (IDS), filed on March 29, 2006 and February 2, 2006, have been considered. Please refer to Applicants' copies of the 1449 submitted herewith.

Response to Amendment

Applicants' amendments dated May 8, 2006, in which **Claims 1, 8, 10, 13, 14, 15, 22, 25, 26, 34, 36, and 38** have been amended and **Claims 2, 6, 7, 11, 12, 27, 31, 33 and 37** have been cancelled, are acknowledged and have been entered. The Claim Objection to **Claims 1-25 (in part)** is withdrawn in concordance with Applicants' amendments. Applicants' request for rejoinder of method **Claims 26-38** is acknowledged and the Claims have been considered.

Examiner's Amendment

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to Applicants, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mark Russett on June 1, 2006.

The application has been amended as follows:

1. Delete **Claim 32**.

2. In **Claim 26**, line 2, after "related disorder" and before the comma that follows "disorder", insert - - selected from the group consisting of rheumatoid arthritis, sepsis, Crohn's disease, multiple sclerosis, psoriasis, or insulin-dependent diabetes mellitus - -.

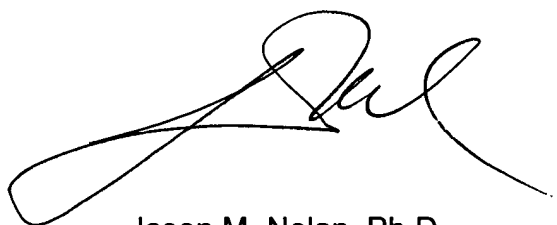
Reasons for Allowance

The present invention pertains to the purines of formula I in **Claim 1** and methods of using these compounds for the treatment of interleukin-12 overproduction-related disorders. The compounds according to formula I are free of the prior art; nothing known in the art anticipates or renders the compounds of the instant application obvious. The closest prior art related to the formula I is compound RN 7469-10-5, taught by Breshears *et al.* (*J. Amer. Chem. Soc.* **1959**, 81, 3789-92). Compound RN 7469-10-5 fulfills all of the limitations of formula I with the exception of **R¹**, which is an alkyl-heteroaryl moiety. In the instant application, **R¹** can be aryl or heteroaryl and does not include an alkyl-heteroaryl moiety in the claim. One skilled in the art would be enabled to make and use the compounds taught herein for the purpose of treating interleukin-12 overproduction-related disorders selected from the group consisting of rheumatoid arthritis, sepsis, Crohn's disease, multiple sclerosis, psoriasis, or insulin-dependent diabetes mellitus using the teachings of the Specification (assays on pages 45-48) in conjunction with the teachings in the prior art.

Art Unit: 1626

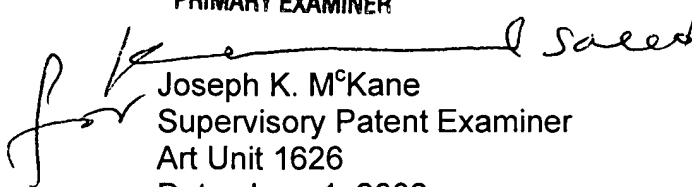
Telephone Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Jason M. Nolan, Ph.D.** whose telephone number is **(571) 272-4356** and electronic mail is **Jason.Nolan@uspto.gov**. The examiner can normally be reached on Mon - Fri (9:00 - 5:30PM). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Joseph M^cKane** can be reached on **(571) 272-0699**. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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KAMAL A. SAEED, PH.D.
PRIMARY EXAMINER



Joseph K. M^cKane
Supervisory Patent Examiner
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Date: June 1, 2006